## **LMA District Cover Sheet**

## **Spring 2014 Levee Inspection Results**

# **Sutter Maintenance Yard East Levee Sacramento River**

	Spring (March - May)	Summer ** (June - August)	Fall (September - November)	Winter ** (December - February)			
* Overall LMA Rating (Fall Only)							
	** Non-receipt of Su	ımmer or Winter Inspo	ection Reports may effec	ct overall annual rating.			
* SPRING INSPECTIONS: Overall maintenance deficiencies are rated	ratings are not detern d using the same crite			ual maintenance			
	FALL INSPECTIONS: The overall maintenance rating shown above is based on operation and maintenance deficiencies identified within the attached unit inspection reports. This rating is not intended to be an indiction of risk.						
Comments							

### **Unit Cover Sheet**

### **Spring 2014 Levee Inspection Results**

### **Sutter Maintenance Yard East Levee Sacramento River**

Waterway	Bank	Unit Miles
Unit No. 01 Sacramento River	Left	20.39

	Spring (March - May)	Summer (June - August)	(September - November) Fall	Winter (December - February)
Unit Maintenance Rating (Fall Only)				
Date of Inspection	03/13/2014 - 03/13/2014			
DWR Inspector	Bob Duffey			
Accompanied By	Bryan Reniff Sutter Maintenance Yard			

#### **Summer & Winter Inspections**

The Local Maintaining Agency (LMA) is responsible for summer and winter inspections. The LMA is required to submit a report regarding summer and winter inspections to the California Department of Water Resources (DWR).

DWR must be informed on the:

- a) completion of the inspection
- b) any changes other than the results of normal maintenance
- c) corrections to deficiencies noted in this report

If additional items are noted, further documentation of those items must also be submitted.

The LMA should submit this information to DWR using the LMA web application tool available at:

### http://cdec.water.ca.gov/lma.html

If the LMA is unable to submit information on this webpage, please contact DWR for assistance.

The LMA should submit the information and any associated documentation by September 30 for summer inspections and March 31 for winter inspections.

# Levee Inspection Report By Mile - Spring 2014

# **Sutter Maintenance Yard East Levee Sacramento River**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Sacramento River	Left	20.39	03/13/2014 03/13/2014	Bob Duffey

LM Start		Rating **	Α	Issue No. 31		31	
LM End		Issue Type +	Ma	Location *	_ocation * LS		
Category	Earthen Levee			GPS La	atitud	e/Longitude	
Calegory						End	
Item		Operations & Maintenance			0		0
пеш	Manuals				0		0
DWR ID	DWR_ST0	003_01_s _ 201	3_31				
Action/Comments							

No Photos

LM Start		Rating **	Α	Issue No.		32		
LM End		Issue Type +	Ma	Location *		LS		
Category	Earthen L	evee		GPS Latitude/Longitude			le/Longitude	
Calegory				Start	End			
Item	Emergency Supplies &				0		0	
пеш	Equipmer	nt			0		0	
DWR ID	DWR_ST0	003_01_s _ 201	3_32					
		Action/	Comme	nts				

No Photos

LM Start		Rating **	Α	Issue No.		33	
LM End		Issue Type +	Ma	Location *		LS	
Category	Earthen L	evee	GPS Latitude/Longitude				
Calegory				Start		End	
Item	Flood Pre	paredness & Training			0		0
пеш					0		0
DWR ID	DWR_ST0	003_01_s _ 201	3_33				
		Action/	Comme	nts			

No Photos

\* Location LS : Land Side WS: Water Side CR : Crown

\*\* Rating A : Acceptable
M : Minimally Acceptable
U : Unacceptable

N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain + Issue Type

Ma : Maintenance Deficiancy
Ob : Design & System Obsolescence
En : Enforcement

# Levee Inspection Report By Mile - Spring 2014

## **Sutter Maintenance Yard East Levee Sacramento River**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Sacramento River	Left	20.39	03/13/2014 03/13/2014	Bob Duffey

LM Start	0.00	Rating **	М	Issue No.		27	
LM End	11.41	Issue Type +	Ma	Location *	WS		
Category	Suppleme	plemental		GPS Latitude/Longitu		le/Longitude	
Calegory				Start		End	
Item	USACE E	rosion Survey	/	39.2663	15 °	39.265730 °	
пеш				-122.0206	82 °	-122.014925 °	
DWR ID							
	Action/Comments						

Inspector Comments: 2009 - Slump in the middle of the section has left a vertical section on the bank. 2010 - Old cobble site unraveling, site extended downstream. 2013: No observed changes. [2013 Site ID: SAC\_151-0\_R]



#### USACE 2013 Photo #1

LM Start	0.08	Rating **	U	Issue No.	3		
LM End	0.14	Issue Type +	En	Location *		WS	
Catagoni Earthen Levee			GPS Latitude/Longitude				
Category			Start		End		
Item	Encroach	ments	39.194978 °		39.195022	0	
пеш				-121.9375	02 °	-121.938563	0
DWR ID	DWR_ST0	003_01_s _ 201	2_3				
Action/Comments							
Building							



View of a old building next to the landside toe.

LM Start	1.11	Rating **	U	Issue No.		34	
LM End	1.11	Issue Type +	En	Location *		LS	
Category	Earthen L	Levee GPS Latitude/Lon		de/Longitude			
Category				Start		End	
Item	Encroach	croachments 39.194105°		39.194105	0		
пеш				121.9535	58 °	121.953558	0
DWR ID	DWR_ST0	003_01_s _ 201	3_34				
		Action/	Comme	nts			
Pipe							
Inspector (	Comments	: The pipe ha	s rusted	apart at the	toe	of the levee.	

No Photos

Rating

A : Acceptable
M : Minimally Acceptable U : Unacceptable

N : Not Inspected/Rated C : Corrected A/W: Acceptable but Monitor & Maintain

+ Issue Type

Ma : Maintenance Deficiancy
Ob : Design & System Obsolescence En : Enforcement

## Levee Inspection Report By Mile - Spring 2014

### **Sutter Maintenance Yard East Levee Sacramento River**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Sacramento River	Left	20.39	03/13/2014 03/13/2014	Bob Duffey

LM Start	1.11	Rating **	М	Issue No.		8	
LM End	1.11	Issue Type +	Type + En			LS	
Category Supplemental				GPS Latitude/Longitude			
Calegory			Start		End		
Item	DWR UCIP Field Study			39.1941	06 °	39.194106 °	
пеш				-121.9535	12 °	-121.953512 °	
DWR ID	DWR_ST0	003_01_s _ 201	4_8				

Action/Comments

Inspector Comments: FS\_ID:26125 EP\_NO: 9527

Repair Type: Crossing Status:

UCIP Comments: Abandoned and plugged/capped steel pipe on WS berm. DWR leaky pipe marker on LS (12-3). Slope failure on LS. Needs capping of LS steel pipe after detailed investigation/29/2013 Pipe does not appear to be abandoned. On the WS it appears that a smaller pipe was sleeved into the 18in. pipe and then the difference capped and welded. Pump was not running at time of inspection but LS ditch near outlet was wet. LS slope damage and leaky pipe marker are still present2/30/2013 Same as last inspection.

FIELD\_STRUCT\_DESC: 18-inch steel pipe through the levee 12.5 feet below the crown. Gate valve on the waterward side. Vertical pump on the bank. (ABO No. 9527 - Butte Creek Farms). O&M manual 136, revision May 2011

FS Date: 1/2/2014 7:14:45 AM



Waterside view: overview

### Levee Inspection Report By Mile - Spring 2014

## **Sutter Maintenance Yard East Levee Sacramento River**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Sacramento River	Left	20.39	03/13/2014 03/13/2014	Bob Duffey

LM Start	1.85	Rating **	М	Issue No.		13		
LM End	1.85	Issue Type +	En	Location *	LS			
Category				GPS Latitude/Longitude				
Calegory				Start		End		
Item	DWR UC	IP Field Study	,	39.1881	64 °	39.188164	0	
пеш				-121.9647	21 °	-121.964721	0	
DWR ID	DWR_ST0	003_01_s _ 201	4_13					
Action/Comments								

Inspector Comments: FS\_ID:26128

EP\_NO: 9543 Repair Type: Crossing Status:

UCIP Comments: Sloughing LS slope and river bank. DWR marking for leaky pip₹/29/2013 Same as last inspection2/30/2013 Same as last inspection.

FIELD\_STRUCT\_DESC: 14-inch steel pipe encased in concrete through the levee 12.5 feet below the crown. Slant pump mounted on pile structure on berm. Slide gate in 48-inch riser on berm, walkway to pump. Discharges into concrete distribution box at landward toe. Flap gate on the landward end. (ABO No. 9543 - Harada). O&M manual 136, revision May 2011

FS Date: 1/2/2014 7:47:25 AM



Waterside view: abandoned pump station.

### Levee Inspection Report By Mile - Spring 2014

### **Sutter Maintenance Yard East Levee Sacramento River**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Sacramento River	Left	20.39	03/13/2014 03/13/2014	Bob Duffey

LM Start	3.35	Rating **	М	Issue No.		23	
LM End	3.35	Issue Type +	En	Location *	LS		
Category				GPS Latitude/Longitude			
Calegory				Start		End	
Item	DWR UC	IP Field Study	,	39.1981	80°	39.198180	0
пеш				-121.9855	57 °	-121.985557	0
DWR ID	DWR_ST0	003_01_s _ 201	4_23				
Action/Comments							

Inspector Comments: FS\_ID:26146

EP\_NO: 9539 Repair Type: Crossing Status:

UCIP Comments: - it seems that the system was originally designed for drainage, later converted into irrigation system. 6-inch GI pipe and 18-inch PVC pipes inserted into culvert from LS (not plugged)WS opening is plugged with concrete probably pump is located 350 ft from levee as seen from Google Earth Map/29/2013 Same as last inspection/12/30/2013 Same as last inspection.

FIELD\_STRUCT\_DESC: A 30-inch by 36-inch concrete culvert drain through the levee. Gates with 2-inch flashboards on the waterward end. 18-inch PVC pipe through culvert. 13.6 ft invert below crown. (ABO No. 9539 - Locvich). O&M manual 136, revision May 2011

FS Date: 1/2/2014 8:05:57 AM



Waterside view: plugged concrete structure and siphon breakers

\* Location LS : Land Side WS : Water Side CR : Crown \*\* Rating

A : Acceptable
M : Minimally Acceptable
U : Unacceptable

N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain + Issue Type

Ma : Maintenance Deficiancy
Ob : Design & System Obsolescence

## Levee Inspection Report By Mile - Spring 2014

### **Sutter Maintenance Yard East Levee Sacramento River**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Sacramento River	Left	20.39	03/13/2014 03/13/2014	Bob Duffey

LM Start	3.79	Rating **	М	Issue No.		24	
LM End	3.79	Issue Type +	En	Location *		LS	
Supplemental Supplemental				GPS Latitude/Longitude			
Calegory			Start		End		
Item	DWR UCIP Field Study			39.20414	1°	39.204141 °	
пеш			-121.98269	8 °	-121.982698 °		
DWR ID	DWR_ST0	003_01_s _ 201	4_24				

Action/Comments

Inspector Comments: FS\_ID:26395

EP\_NO: 9501 Repair Type: Crossing Status:

UCIP Comments: Concrete pit on WS bernConcrete distribution box on LS silted and erosion around the bo&lope failure/ transverse cracks on LS levee slopeIwo depressions on WS bernI/29/2013 Repairs to LS slope and pipe are in progress. Nothing has been done yet to the WS depression\$\frac{3}{2}\frac{3}{2}\frac{13}{2}\fr

FIELD\_STRUCT\_DESC: 16-inch steel pipe through the levee with pump house over concrete pit on berm. No control valves visible. Discharges into concrete box at the landward toe. (ABO No. 9501 - Mayfair Farms). According to Permit 9501A, it is an existing abandoned pipe located at HLM 4.37.

O&M manual 136, revision May 2011. FS Date: 1/6/2014 9:58:38 AM



### Waterside view: overview of pipe and pump house

LM Start	4.19	Rating **	М	Issue No.		11	
LM End	4.19	Issue Type +	En	Location *		WS	
Category Earthen Levee				GPS La	le/Longitude		
Category			Start		End		
Encroachments ltem			39.208935 °		39.208935 °		
item			-121.985310 °		-121.985310 °		
DWR ID	DWR_ST0	003_01_s _ 201	2_11				
	Action/Comments						
Building						_	



Veiw of the trailer next to the W/S toe.

\* Location

LS: Land Side

WS: Water Side

CR: Crown

\*\* Rating

A : Acceptable
M : Minimally Acceptable
U : Unacceptable

N : Not Inspected/Rated C : Corrected VW : Acceptable but Monitor & Maintain + Issue Type

Ma : Maintenance Deficiancy
Ob : Design & System Obsolescence

## Levee Inspection Report By Mile - Spring 2014

### **Sutter Maintenance Yard East Levee Sacramento River**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Sacramento River	Left	20.39	03/13/2014 03/13/2014	Bob Duffey

LM Start	4.38	Rating **	М	Issue No.		26	
LM End	4.38	Issue Type +	En	Location *		WS	
Category			GPS Latitude/Longitude				
Calegory				Start		End	
Item	DWR UC	IP Field Study		39.21024	7 °	39.210247	0
пеш				-121.988238	3°	-121.988238	0
DWR ID	DWR_ST0	003_01_s _ 201	4_26				

Action/Comments

Inspector Comments: FS\_ID:26155

EP\_NO: 9501A Repair Type: Crossing Status:

UCIP Comments: Motor and pump on berm. Appears an abandoned crossing. Leaky valve on LS slop€ipe removed and laying on berm. No electric connection to the pump/29/2013 Not an abandoned crossing. Pump is connected to WS pipe end at water level and is pumping water to LS and then goes underground to an irrigation ditch about 100yds. upstream. Pump and pipes are disconnected and pulled up to WS toe for high water season. Leaky valve on LS shoulder does not appear to have been fixed2/30/2013 Same as last inspection. FIELD\_STRUCT\_DESC: Abandoned 10-inch diameter asphalt coated steel pipe through the levee 5 feet below the crown. Siphon breaker on the landward shoulder. (ABO No. 9501A - Mayfair Packing). FS Date: 1/2/2014 8:33:19 AM



Waterside view: overview of pump and abandoned pipe

\* Location
LS: Land Side
WS: Water Side
CR: Crown

\*\* Rating

A : Acceptable
M : Minimally Acceptable
U : Unacceptable

N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain + Issue Type

Ma : Maintenance Deficiancy
Ob : Design & System Obsolescence

## Levee Inspection Report By Mile - Spring 2014

### **Sutter Maintenance Yard East Levee Sacramento River**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Sacramento River	Left	20.39	03/13/2014 03/13/2014	Bob Duffey

LM Start	4.38	Rating **	М	Issue No.		35	
LM End	4.38	Issue Type +	En	Location *	WS		
Category Supplemental			GPS Latitude/Longitude				
Calegory				Start		End	
Item	DWR UC	DWR UCIP Field Study			7 °	39.210257	0
пеш				-121.988250	°	-121.988250	0
DWR ID	DWR_ST0	003_01_s _ 201	4_35				

Action/Comments

Inspector Comments: FS\_ID:26156

EP\_NO: 9501 Repair Type: Crossing Status:

UCIP Comments: Need to be properly abandoned. Transverse cracks on levee roads found a concrete outlet on LS. It is not clear whether this passes through the lever/29/2013 Same as last inspection/2/30/2013 Same as last inspection.

FIELD\_STRUCT\_DESC: Abandoned 16-inch steel pipe through the levee 13.9 feet below the crown. Gate valve and pump in pump house on berm. Flap gate and concrete distribution box on the landward end. (ABO No. 9501 - Mayfair Farms). O&M manual 136, revision May 2011. FS Date: 1/2/2014 8:35:50 AM



Waterside view: overview

LM Start	4.39	Rating **	М	Issue No.		37		
LM End	4.39	Issue Type +	En	Location *		WS		
Category	Supplemental			GPS Latitude/Longitude				
Calegory				Start		End		
Item	DWR UC	IP Field Study		39.2102	80°	39.210280 °		
item					84 °	-121.988284 °		
DWR ID	DWR_ST0	003_01_s _ 201	4_37			·		

#### Action/Comments

Inspector Comments: FS\_ID:26157

EP\_NO: N/A Repair Type: Crossing Status:

UCIP Comments: Debris and detorated concrete. Gate valve in surge tank/29/2013 Same as last inspection12/30/2013 Same as last inspection.

FIELD\_STRUCT\_DESC: 24 inch pipe, 26 ft invert below crown, Slide Gate ws. O&M manual 136, revision May 2011.

FS Date: 1/2/2014 8:36:59 AM



Waterside view: overview of concrete surge box

\* Location

LS: Land Side

WS: Water Side

CR: Crown

\* Rating

A : Acceptable
M : Minimally Acceptable
U : Unacceptable

N : Not Inspected/Rated C : Corrected vW : Acceptable but Monitor & Maintain + Issue Type

Ma : Maintenance Deficiancy
Ob : Design & System Obsolescence

### Levee Inspection Report By Mile - Spring 2014

### **Sutter Maintenance Yard East Levee Sacramento River**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Sacramento River	Left	20.39	03/13/2014 03/13/2014	Bob Duffey

LM Start	4.59	Rating **	М	Issue No.		Issue No.		38
LM End	4.59	Issue Type +	En	Location *		WS		
Category			GPS Latitude/Longitude					
Calegory			Start		End			
Item	DWR UC	IP Field Study		39.21262	?7 °	39.212627 °		
пеш						-121.990413 °		
DWR ID	DWR_ST0	003_01_s _ 201	4_38					

Action/Comments

Inspector Comments: FS\_ID:26158

EP\_NO: 10935 Repair Type: Crossing Status:

UCIP Comments: Found a siphon breaker on LS. Antenna and pump station on WS. Huge erosion on LS slop₹/29/2013 Erosion near LS shoulder may start affecting the roadway if it gets any

worse2/30/2013 Same as last inspection.

FIELD\_STRUCT\_DESC: 24-inch steel pipe through the levee 4.0 feet below the crown. Slant pump on the waterward berm. A siphon breaker is installed on the apex of the pipe and off the levee crown on landside.

(App. No. 10935 - Mayfair Farms). FS Date: 1/2/2014 8:39:01 AM



#### Waterside view: overview of pump station

LM Start	4.66	Rating **	U	Issue No.		12	
LM End	4.84	Issue Type +	En	Location *		CR	
Category	Earthen Levee			GPS Latitude/Longitude			
Category	'y			Start		End	
Item	Encroachments			39.213265 °		39.213265 °	
item				-121.99167	72 °	-121.991672 °	
DWR ID	DWR_ST0	003_01_s _ 201	2_12				
		Action/	Comme	nts			
Building							



View of the barn on the large crown of the levee.

\*\* Rating

A : Acceptable
M : Minimally Acceptable
U : Unacceptable

N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain + Issue Type

Ma : Maintenance Deficiancy
Ob : Design & System Obsolescence

# Levee Inspection Report By Mile - Spring 2014

# **Sutter Maintenance Yard East Levee Sacramento River**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Sacramento River	Left	20.39	03/13/2014 03/13/2014	Bob Duffey

LM Start	4.66	Rating **	М	Issue No.	15		
LM End	4.66	Issue Type +	Ma	Location *	WS		
Category	Earthen L	evee	GPS Latitude/Longitude				
Calegory				Start		End	
Item	Slope Sta	Slope Stability			'1 °	39.213271 °	
пеш				-121.99167	'6	-121.991676 °	
DWR ID	DWR_ST0	003_01_s _ 201	3_15				
Action/Comments							
Repair slo	pe instabili	ity.					



View of the erosion along the waterside slope.

LM Start	4.81	Rating **	U	Issue No.		20																
LM End	4.81 Issue Type + En Location *		Type + En Location *		Issue Type + En Location *		Issue Type + En Location *		Issue Type + En Location *		Issue Type + En Location *		ue Type + En Location *		Issue Type + En Location *		4.81 Issue Type + En Location *		Issue Type + En Location *			LS
Category	Earthen Levee			GPS Latitude/Longitude																		
Calegory	y			Start		End																
Item	Encroachments			39.214168 °		39.214168 °																
пеш				-121.9935	15 °	-121.993515 °																
DWR ID	DWR_ST0	003_01_s _ 201	2_20																			
		Action/	Comme	nts																		
Building																						



View of the building next to the L/S toe.

LM Start	4.81	Rating **	М	Issue No.		22	
LM End	4.81	Issue Type +	En	Location *		LS	
Category	Earthen L	evee	GPS Latitude/Lon			le/Longitude	
Calegory	У			Start		End	
Item	Vegetatio	Vegetation			18 °	39.214218 °	
item				-121.9936	82 °	-121.993682 °	
DWR ID	DWR_ST0	003_01_s _ 201	2_22				
Action/Comments							
Landscapi	ng						

No Photos

+ Issue Type

Ma : Maintenance Deficiancy
Ob : Design & System Obsolescence
En : Enforcement

## Levee Inspection Report By Mile - Spring 2014

### Sutter Maintenance Yard East Levee Sacramento River

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Sacramento River	Left	20.39	03/13/2014 03/13/2014	Bob Duffey

LM Start	4.84	Rating **	М	Issue No.		18	
LM End	4.84	Issue Type +	Ma	Location *		WS	
Category Earthen Levee				GPS Latitude/Longitude			
Calegory				Start		End	
Item	Trim / Thi	m / Thin Trees			32 °	39.214215 °	
пеш				-121.99380	)5 °	-121.993810 °	
DWR ID	DWR_ST0	003_01_s _ 201	2_18				
Action/Comments							
Trim trees	Trim trees to at least five feet above ground level.						

No Photos

LM Start	4.99	Rating **	М	Issue No.		39	
LM End	4.99	Issue Type +	En	Location *		WS	
Category	Suppleme	ntal		GPS Latitude/Lor		e/Longitude	
Calegory				Start		End	
Item	DWR UC	IP Field Study		39.21497	0 °	39.214970	٥
item				-121.99717	7 °	-121.997177	٥
DWR ID	DWR_ST0	003_01_s _ 201	4_39				

### Action/Comments

Inspector Comments: FS\_ID:26162

EP\_NO: 2904 Repair Type: Crossing Status:

UCIP Comments: Surge box on WS and distribution box across the county road on LS. Abandoned pump station and electrical panel on WS. A concrete pump pit on W\$/29/2013 Portable tow-pump lowered down WS berm to water level and is pupming water into concrete surge box on WS and the filling the irrigation ditch on LS. Sink hole with standing water that is present above the outlet pipe for the WS surge box. This may indicate a leaking pipe or cracked concrete 2/30/2013 Sink Hole above pipe on WS still present. Pipe end inside of WS surge box shows heavy signs of rust and corrosion. Recommend having an internal camera inspection completed on pipe. FIELD\_STRUCT\_DESC: 36-inch corrugated metal pipe through the levee 18.4 feet below the crown. Slide gate in corrugate metal pipe riser on waterward shoulder, pump and concrete pump pit on the waterward bank. Concrete surge box on the waterward berm. Discharges into irrigation ditch on the opposite side of the county road. (App. No. 2904 -Arnold). Application was for an existing pumping system. O&M manual 136, revision May 2011.

FS Date: 1/2/2014 8:47:38 AM



Waterside view: CMP riser and surge box

Location LS: Land Side WS: Water Side CR : Crown

Rating

A: Acceptable : Minimally Acceptable U : Unacceptable

N: Not Inspected/Rated Corrected A/W: Acceptable but Monitor & Maintain + Issue Type

Ma : Maintenance Deficiancy Ob: Design & System Obsolescence

## Levee Inspection Report By Mile - Spring 2014

### Sutter Maintenance Yard East Levee Sacramento River

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Sacramento River	Left	20.39	03/13/2014 03/13/2014	Bob Duffey

LM Start	5.38	Rating **	М	Issue No.		40	
LM End	5.38	Issue Type +	En	Location *		WS	
Category Supplemental			GPS Latitude/Longitude				
				Start		End	
Item	DWR UC	P Field Study		39.21709	99 °	39.217099 °	
item			-122.0037	78 °	-122.003778 °		
DWR ID	DWR_ST0	003_01_s _ 201	4_40				

Action/Comments

Inspector Comments: FS\_ID:26166

EP NO: 9514 Repair Type: Crossing Status:

UCIP Comments: - Water transfer ditch and CMP riser on W\$/23/13 8inch pvc running through pipe preventing slide gate from closing. No positive pipe closure for high water season. Stem on WS screw gate is bent2/18/2013 Same as last inspection. Levee ispections is working with land owner to solve this issue. FIELD\_STRUCT\_DESC: 24-inch corrugated metal pipe through the levee, slide gate in corrugated metal pipe riser. Concrete headwall on

waterward berm, pump on riverbank. Discharges in field at landward toe. Irrigation ditch across waterward berm to headwall. (ABO No. 9514 - Boggs). Pipe invert 11.0 ft below crown. O&M manual 136, revision May 2011.

FS Date: 1/2/2014 8:58:19 AM



Waterside view: CMP riser with slide gate

Location LS : Land Side WS: Water Side CR : Crown

Rating

A: Acceptable M : Minimally Acceptable U : Unacceptable

N : Not Inspected/Rated : Corrected A/W: Acceptable but Monitor & Maintain + Issue Type

Ma : Maintenance Deficiancy
Ob : Design & System Obsolescence

## Levee Inspection Report By Mile - Spring 2014

## **Sutter Maintenance Yard East Levee Sacramento River**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Sacramento River	Left	20.39	03/13/2014 03/13/2014	Bob Duffey

LM Start	6.02	Rating **	М	Issue No.		41	_
LM End	6.02	Issue Type +	En	Location *		WS	
Category				GPS Latitude/Longitude			
Calegory				Start		End	
Item	DWR UC	IP Field Study	,	39.2207	01 °	39.220701	0
пеш				-122.0025	38 °	-122.002538	0
DWR ID	DWR_ST0	003_01_s _ 201					
Action/Comments							

Inspector Comments: FS\_ID:26167

EP\_NO: 9514 Repair Type: Crossing Status:

UCIP Comments: 36-inch CMP found instead of 30-inch CMP. LS pipe tampered/23/2013 8inch PVC pipe ran through 36inch CMP preventing screw gate from closing for high water season/2/18/2013 Same as last inspection. Levve inspections is working with land owner to solve the issue.

FIELD\_STRUCT\_DESC: 36-inch corrugated metal drainpipe through the levee 12.0 feet below the crown. Slide gate in corrugated metal pipe riser on the waterward slope. (ABO No. 9514 - Boggs). O&M manual 136, revision May 2011.

FS Date: 1/2/2014 8:59:39 AM



Waterside view: overview

LM Start	6.33	Rating **	М	Issue No.		14	
LM End	6.33	Issue Type +	Ma	Location *		LS	
Category Earthen Levee			GPS La	e/Longitude			
			Start		End		
Item	Encroachments			39.2235	40 °	39.223540 °	
item				-121.9990	28 °	-121.999028 °	
DWR ID	DWR_ST0	003_01_s _ 201	2_14				
Action/Comments							
Prunings							

No Photos

+ Issue Type

Ma : Maintenance Deficiancy
Ob : Design & System Obsolescence

### Levee Inspection Report By Mile - Spring 2014

## **Sutter Maintenance Yard East Levee Sacramento River**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Sacramento River	Left	20.39	03/13/2014 03/13/2014	Bob Duffey

LM Start	6.34	Rating **		Issue No.		53
LM End	6.34	Issue Type +		Location *		LS
Category	Category Earthen Levee		GPS Latitude/Longitude		de/Longitude	
Category				Start		End
Encroachments ltem		39.223563 °		39.223563 °		
пеш				-121.99904	8 °	-121.999048 °
DWR ID	DWR_ST0	003_01_s _ 201	4_53			
		Action/	Comme	nts		
Prunings						



Photo 1 of 1: rduffey\_s\_20140317\_125.jpg

View of the prunings along the landside toe.

6.34	Rating **	М	Issue No.		42			
6.34	Issue Type +	En	Location *	LS				
Category				GPS Latitude/Longitude				
			Start		End			
DWR UC	IP Field Study		39.223796	° (	39.223796	0		
			-121.999014	۱°	-121.999014	0		
DWR_ST0	003_01_s _ 201	4_42						
	6.34 Suppleme	6.34 Issue Type + Supplemental  DWR UCIP Field Study	6.34 Issue Type + En	6.34         Issue Type +         En         Location *           Supplemental         GPS Lati           Start         Start           DWR UCIP Field Study         39.223796           -121.999014	6.34   Issue Type +   En   Location *    Supplemental   GPS Latitud   Start    DWR UCIP Field Study   39.223796 °    -121.999014 °	6.34         Issue Type +         En         Location *         LS           Supplemental         GPS Latitude/Longitude           Start         End           DWR UCIP Field Study         39.223796 °         39.223796 °           -121.999014 °         -121.999014		

#### Action/Comments

Inspector Comments: FS\_ID:26168

EP\_NO: 9530 Repair Type: Crossing Status:

UCIP Comments: Pipe outlet on WS partially burried, it needs cleaning/23/2013 Same as last inspection/2/18/2013 Same as

last inspection.

FIELD\_STRUCT\_DESC: 30-inch corrugated metal drainpipe through the levee 15.0 feet below the crown. Slide gate in corrugated metal pipe riser on the waterward slope. (ABO No. 9530 - Halsey).

FS Date: 1/2/2014 9:00:48 AM



Waterside view: CMP riser with slide gate

+ Issue Type

Ma : Maintenance Deficiancy
Ob : Design & System Obsolescence

# Levee Inspection Report By Mile - Spring 2014

### **Sutter Maintenance Yard East Levee Sacramento River**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Sacramento River	Left	20.39	03/13/2014 03/13/2014	Bob Duffey

LM Start	6.42	Rating **	М	Issue No.		21	
LM End	6.42	Issue Type +	Ma	Location *	LS		
Category	evee	GPS La	le/Longitude				
Category				Start		End	
Encroachments			39.224982 °		39.225013 °		
пеш			-121.998600 °		-121.998585 °		
DWR ID	DWR_ST0	003_01_s _ 201	2_21				
		Action/	Comme	nts			
Material							



View of the material & garbage along the toe.

LM Start	6.80	Rating **	М	Issue No.		19	
LM End	6.80	Issue Type +	Ma	Location *		WS	
Category Earthen Levee				GPS Latitude/Longitude			
				Start		End	
Item	Erosion / Bank Caving			39.228295 °		° 39.228295 °	
пеш				-121.9985	71 °	-121.998571 °	
DWR ID	DWR_ST0	003_01_s _ 201	3_19				
Action/Comments							
Schedule repair of erosion site prior to the next inspection.							



Erosion along the waterside crown.

A : Acceptable
M : Minimally Acceptable
U : Unacceptable

N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain

+ Issue Type

Ma : Maintenance Deficiancy
Ob : Design & System Obsolescence

## Levee Inspection Report By Mile - Spring 2014

### **Sutter Maintenance Yard East Levee Sacramento River**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Sacramento River	Left	20.39	03/13/2014 03/13/2014	Bob Duffey

LM Start	7.72	Rating **	М	Issue No.		43	
LM End	7.72	Issue Type +	En	Location *	WS		
Category			GPS Latitude/Longitude				
Calegory				Start		End	
Item	DWR UC	IP Field Study		39.239458	°	39.239458	٥
item			-121.993398	°	-121.993398	٥	
DWR ID	DWR_ST0	003_01_s _ 201	4_43				

Action/Comments

Inspector Comments: FS\_ID:26190

EP\_NO: 9532 Repair Type: Crossing Status:

UCIP Comments: Silted concrete box on WS. Depression/erosion

around concrete box on W\$/23/2013 Same as last inspection 12/18/2013 Same as last inspection.

FIELD\_STRUCT\_DESC: 3-foot by 4-foot concrete box culvert drain through the levee 11.6 feet below the crown. Slide gate in concrete box on the waterward slope. (ABO No. 9532 - Martin). O&M manual 136, revision May 2011.

FS Date: 1/2/2014 9:35:14 AM



Waterside view: concrete box with slide gate

LM Start	8.32	Rating **	М	Issue No.		44
LM End	8.32	Issue Type +	En	Location *	WS	
Catagony	Suppleme	ental		GPS La	titud	le/Longitude
Category			Start		End	
Item	DWR UC	IP Field Study	,	39.2463	17 °	39.246317 °
item				-121.9988	25 °	-121.998825 °
DWR ID	DWR_ST0	003_01_s _ 201	4_44			

#### Action/Comments

Inspector Comments: FS\_ID:26193

EP\_NO: 9529 Repair Type: Crossing Status:

UCIP Comments: Looks abandoned. CMP riser with slide gate on WS. Concrete distribution box on LS- full with silt/23/2013 Same as last inspection/12/18/2013 Same as last inspection.

FIELD\_STRUCT\_DESC: 24-inch corrugated metal pipe through the levee, slide gate CMP riser on the waterward slope. Concrete box at the landward toe. Pipe invert 12.8 ft below crown. (ABO No. 9529 - Dorwood Ranch)O&M manual 136, revision May 2011.

FS Date: 1/2/2014 9:40:47 AM



Landside view: overview of concrete box

\* Location

LS: Land Side

WS: Water Side

CR: Crown

\* Rating

A : Acceptable
M : Minimally Acceptable
U : Unacceptable

N : Not Inspected/Rated C : Corrected /W : Acceptable but Monitor & Maintain + Issue Type

Ma : Maintenance Deficiancy
Ob : Design & System Obsolescence

# Levee Inspection Report By Mile - Spring 2014

# **Sutter Maintenance Yard East Levee Sacramento River**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Sacramento River	Left	20.39	03/13/2014 03/13/2014	Bob Duffey

LM Start	8.76	Rating **	U	Issue No.	2		
LM End	8.76	Issue Type +	En	Location *	LS		
Category	Earthen L	evee		GPS Latitude/Longitude			
Calegory				Start		End	
Item	Encroachments			39.252260 °		39.252260	0
item		-121.9977	21 °	-121.997721	0		
DWR ID	DWR_ST0	003_01_s _ 201	2_2				
		Action/	Comme	nts			
Building							



View of the building next to the toe of the levee.

		D :: ++	_				
LM Start	9.23	Rating **	С	Issue No.		1	
LM End	9.23	Issue Type +	Ma	Location *		LS	
Category Earthen Levee				GPS Latitude/Longitude			
Category				Start		End	
Item	Encroachments			39.257977 °		39.257977 °	
item				-122.0003	22 °	-122.000322 °	
DWR ID	DWR_ST0	003_01_s _ 201	2_1				
		Action/	Comme	nts			
Prunings							

No Photos

LM Start	10.27	Rating **	М	Issue No.		4	
LM End	10.27	Issue Type +	En	Location *		LS	
Category Earthen Levee				GPS Latitude/Longitude			
Calegory			Start		End		
Item	Encroachments			39.270431 °		39.270431 °	
item			-121.9997	82 °	-121.999782 °		
DWR ID	DWR_ST0	003_01_s _ 201	2_4				
		Action/	Comme	nts			
Building							

No Photos

## Levee Inspection Report By Mile - Spring 2014

### **Sutter Maintenance Yard East Levee Sacramento River**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Sacramento River	Left	20.39	03/13/2014 03/13/2014	Bob Duffey

LM Start	10.36	Rating **	М	Issue No.	5		
LM End	10.36	Issue Type +	Ma	Location *	LS		
Category	Category Earthen Levee			GPS La	e/Longitude	/Longitude	
Calegory				Start		End	
Vegetation			39.27050	03 °	39.270503	0	
Item				-122.0013	39 °	-122.001339	0
DWR ID	DWR_ST0	003_01_s _ 201	2_5				
Action/Comments							
Elderberries are blocking visibility and flood fight capability.							

No Photos

LM Start	10.37	Rating **	A/W	Issue No.	54			
LM End	10.37	Issue Type +	Ма	Location *	LS			
Category	Category Earthen Levee				GPS Latitude/Longitude			
Category		Start		End				
Item	Animal Co	ontrol		39.27054°	ı °	39.270541	0	
пеш		-122.001577 °		-122.001577	0			
DWR ID	DWR_ST0003_01_s _ 2014_54							
		Action/	Commo	oto				

#### Action/Comments

No rodents visible, but rodent burrows visible; need to backfill and compact or grout burrows.



View of the active rodent hole along the landside slope.

LM Start	11.51	Rating **	М	Issue No.		28		
LM End	11.51	Issue Type +	Ма	Location *	WS			
Category	Category				GPS Latitude/Longitude			
Calegory			Start		End			
Item	USACE Erosion Survey			39.279910	°	39.283853 °		
item				-122.01822°	°	-122.016113 °		
DWR ID						·		

### Action/Comments

Inspector Comments: 2008 - Large rotational/mass failure in the bank with tree slump. 2009 - Minimal new erosion, the tree is leaning further into the river. 2011 - Site extended downstream. 2012 - Minor new erosion and tree roots are further exposed. 2013: No observed changes. [2013 Site ID: SAC\_152-6\_L]



USACE 2013 Photo #1

Location LS : Land Side WS: Water Side CR : Crown

Rating

: Acceptable : Minimally Acceptable U : Unacceptable

N : Not Inspected/Rated : Corrected : Acceptable but Monitor & Maintain + Issue Type

Ma : Maintenance Deficiancy Ob: Design & System Obsolescence En : Enforcement

# Levee Inspection Report By Mile - Spring 2014

## **Sutter Maintenance Yard East Levee Sacramento River**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Sacramento River	Left	20.39	03/13/2014 03/13/2014	Bob Duffey

LM Start	11.67	Rating **	М	Issue No.		6		
LM End	11.90	Issue Type +	En	Location *	LS			
Catagony	Category Earthen Levee				GPS Latitude/Longitude			
Calegory			Start		End			
Item	Encroachments			39.282064 °		39.285084 °		
item				-122.0165	17 °	-122.014815 °		
DWR ID	DWR_ST0	003_01_s _ 201	2_6					
Action/Comments								
Ditch								

No Photos

LM Start	11.83	Rating **	М	Issue No.	29		
LM End	11.83	Issue Type +	Ma	Location *	WS		
Category				GPS Latitude/Longitude			
Category		Start		End			
Item	USACE Erosion Survey			39.28456	8 °	39.285298	0
item				-122.01569	0 °	-122.015208	0
DWR ID							

### Action/Comments

Inspector Comments: 2006 - Large rotational/mass failure in the bank with tree slump. Tough clayey toe material. 2007 - Site is between stone revetments with a pump station at the downstream end. 2010 - Erosion is into the levee toe. 2011 - Minor new erosion. 2012 - Minor new erosion. 2013: No observed changes. [2013 Site ID: SAC\_152-8\_L]



### USACE 2013 Photo #1

LM Start	11.95	Rating **	М	Issue No.		7	
LM End	12.18	Issue Type +	En	Location *		LS	
	Earthen L		GPS Latitude/Longitude				
Category				Start		End	
Encroachments Item			39.285658 °		39.288978 °		
item				-122.0145	74 °	-122.013892 °	
DWR ID	DWR_ST0	003_01_s _ 201	2_7				
Action/Comments							
Ditch							

No Photos

A : Acceptable
M : Minimally Acceptable
U : Unacceptable

N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain + Issue Type

Ma : Maintenance Deficiancy
Ob : Design & System Obsolescence
En : Enforcement

### Levee Inspection Report By Mile - Spring 2014

### **Sutter Maintenance Yard East Levee Sacramento River**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Sacramento River	Left	20.39	03/13/2014 03/13/2014	Bob Duffey

LM Start	12.06	Rating **	М	Issue No.		45	
LM End	12.06	Issue Type + En Location		Location *		LS	
Category Supplemental			GPS Latitude/Longitude				
Calegory				Start		End	
ltom	DWR UC	WR UCIP Field Study		39.28725	1°	39.287251 °	
Item				-122.01407	6°	-122.014076 °	
DWR ID	DWR_ST0	003_01_s _ 201	4_45				

Action/Comments

Inspector Comments: FS\_ID:26215

EP\_NO: 9514 Repair Type: Crossing Status:

UCIP Comments: Gate valve in CMP riser not visible. Flap gate in concrete distribution box on LS not visible/accessible. Looks cleaning required inside concrete surge tank on WS due to silting/29/2013 Pump running and WS surge tank was full of water so not sure if silt was cleaned out. LS flap gate was visible and is in good condition/2/30/2013 Same as last inspection.

FIELD\_STRUCT\_DESC: 36-inch corrugated metal pipe through the levee, 18.1 feet below the crown, pump house on the waterward slope. Gate valve in corrugated metal riser at waterward toe. Flap gate in concrete distribution box at the landward toe. (ABO No. 9514 - Boggs). O&M manual 136, revision May 2011.

FS Date: 1/2/2014 1:35:53 PM



Waterside view: steel pipe, pump, surge box & CMP riser

\* Location

LS: Land Side

WS: Water Side

CR: Crown

\*\* Rating

A : Acceptable
M : Minimally Acceptable
U : Unacceptable

N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain + Issue Type

Ma : Maintenance Deficiancy
Ob : Design & System Obsolescence

### Levee Inspection Report By Mile - Spring 2014

### **Sutter Maintenance Yard East Levee Sacramento River**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Sacramento River	Left	20.39	03/13/2014 03/13/2014	Bob Duffey

LM Start	12.43	Rating **	М	Issue No.		46	
LM End	12.43	Issue Type +	En	Location *		LS	
Category			GPS Latitude/Longitude				
Calegory				Start		End	
Itom	DWR UC	DWR UCIP Field Study			°	39.292608	
Item				-122.01348	°	-122.013483	
DWR ID	DWR_ST0003_01_s _ 2014_46						

Action/Comments

Inspector Comments: FS\_ID:26216

EP\_NO: 9513 Repair Type: Crossing Status:

UCIP Comments: A 2.5 inch GI pipe through 36 inch CMP found. A 2 inch electrical conduit also found/29/2013 2.5in. GI pipe and chain in WS surge box will prevent slide gate from closing fully for high water seasof12/30/2013 Same as last inspection.

FIELD\_STRUCT\_DESC: 24-inch corrugated metal pipe through the levee. Slide gate in concrete surge box on berm. Slant pump on riverbank. Pipe invert 16.5 ft below crown. Concrete distribution box at the landward toe. (ABO No. 9513 -Boggs). O&M manual 136, revision May 2011.

FS Date: 1/2/2014 1:36:55 PM



Waterside view: overview of slanted pump and shed

### Levee Inspection Report By Mile - Spring 2014

### **Sutter Maintenance Yard East Levee Sacramento River**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Sacramento River	Left	20.39	03/13/2014 03/13/2014	Bob Duffey

LM Start	12.96	Rating **	М	Issue No.	47			
LM End	12.96	Issue Type +	En	Location *	LS			
Category Supplemental				GPS Latitude/Longitude				
Calegory				Start		End		
Item	DWR UC	IP Field Study		39.30014	0°	39.300140 °		
пеш				-122.01359	9 °	-122.013599 °		
DWR ID	DWR_ST0003_01_s _ 2014_47							
	Action/Comments							

Inspector Comments: FS\_ID:26220

FS Date: 1/2/2014 1:46:51 PM

EP\_NO: 9510 Repair Type: Crossing Status:

UCIP Comments: Soil erosion around CMP riser and surge concrete box on WS damaged due to overflow. Pump not found. Flap gate missing on WS concrete box. WS slope eroded. Structure might have been used as drainage structure. This needs to be determined during routine inspection/23/2013 Water was flowing from the WS to LS ditch. Not sure where water flow was originating. All erosion problems are still present2/19/2013 Same as last inspection.

FIELD\_STRUCT\_DESC: 36-inch corrugated metal pipe through the levee, 18.0 feet below the crown. Slide gate in 36-inch corrugated metal riser on the waterward slope. Concrete box on the waterward side. Pump mounted on waterward bank. (ABO No. 9510 Forry). O&M manual 136, revision May 2011.

Photo 1 of 1 : UCIP\_5186.jpg

Waterside view: CMP riser on levee slope.

\* Location

LS: Land Side

WS: Water Side

CR: Crown

\*\* Rating

A : Acceptable
M : Minimally Acceptable
U : Unacceptable

N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain

+ Issue Type

Ma : Maintenance Deficiancy
Ob : Design & System Obsolescence

### Levee Inspection Report By Mile - Spring 2014

### **Sutter Maintenance Yard East Levee Sacramento River**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Sacramento River	Left	20.39	03/13/2014 03/13/2014	Bob Duffey

LM Start	13.37	Rating **	М	Issue No.	48			
LM End	13.37	Issue Type +	En	Location *	LS			
Category Supplemental				GPS Latitude/Longitude				
Calegory				Start		End		
Item	DWR UC	IP Field Study	,	39.30606	5 °	39.306065 °		
пеш				-122.01311	2 °	-122.013112 °		
DWR ID	DWR_ST0003_01_s _ 2014_48							
Action/Comments								

Inspector Comments: FS\_ID:26221

EP\_NO: N/A Repair Type: Crossing Status:

UCIP Comments: Outlet pipe silted on WS. Inlet structure damaged on LS. Not properly abandoned/23/2013 Same as last

inspection2/19/2013 Same as last inspection.

FIELD STRUCT DESC: Abandoned 48-inch corrugated metal drainpipe through the levee, 16.5 feet below the crown. Slide gate in 60inch corrugated metal pipe riser on the waterward slope. Landward end of pipe on east side of River Road. O&M manual 136, revision May 2011.

FS Date: 1/2/2014 1:48:59 PM



#### Waterside view: CMP riser with slide gate

LM Start	13.47	Rating **	М	Issue No.		9
LM End	13.66	Issue Type +	Ma	Location *	WS	
Category	Earthen L	GPS La	titud	le/Longitude		
Category				Start		End
Item	Erosion /	rosion / Bank Caving			48 °	39.310231 °
item				-122.01303	37 °	-122.012912 °
DWR ID	DWR_ST0	003_01_s _ 201	2_9			
		Action/	Comme	nts		
Note and monitor erosion site.						



View of the erosion along the W/S toe.

Rating

A : Acceptable
M : Minimally Acceptable U : Unacceptable

N: Not Inspected/Rated : Corrected A/W: Acceptable but Monitor & Maintain + Issue Type

Ma : Maintenance Deficiancy
Ob : Design & System Obsolescence

## Levee Inspection Report By Mile - Spring 2014

### **Sutter Maintenance Yard East Levee Sacramento River**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Sacramento River	Left	20.39	03/13/2014 03/13/2014	Bob Duffey

LM Start	14.55	Rating **	U	Issue No.		25	
LM End	14.55	Issue Type +	En	Location *		WS	
Category	GPS La	atitud	le/Longitude				
Category				Start		End	
Item	Encroach	ments		39.3222	54 °	39.322254	0
пеш				-122.015985 °		-122.015985	0
DWR ID	DWR_ST0	003_01_s _ 201	3_25				
Action/Comments							
Pipe							



View of the unauthorized pipe placed inside the drain pipe.

LM Start	15.47	Rating **	М	Issue No.	49		_
LM End	15.47	Issue Type +	En	Location *	WS		
Category	Supplemental			GPS Latitude/Longitude			
Category		Start		End			
Item	DWR UCIP Field Study			39.33386	8°	39.333868	٥
item			-122.02224	3°	-122.022243	٥	
DWR ID	DWR_ST0	003_01_s _ 201	4_49				

#### Action/Comments

Inspector Comments: FS\_ID:26227

EP\_NO: 9506 Repair Type: Crossing Status:

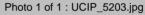
UCIP Comments: Water full on inlet and outlet of the

structuræ/23/2013 Same as last inspection12/19/2013 Same as

last inspection.

FIELD\_STRUCT\_DESC: 24-inch pipe through the levee, 16.5 feet below crown. Pump in floodway. Irrigation transfer ditch on the waterward side to concrete surge box at the waterward toe. Slide gates in corrugated metal pipe riser on the waterward slope. Discharge into concrete distribution box at the landward toe. (ABO No. 9506 - Carter). O&M manual 136, revision May 2011.

FS Date: 1/2/2014 2:20:40 PM





Waterside view: water inlet /surge box

Ma : Maintenance Deficiancy
Ob : Design & System Obsolescence

## Levee Inspection Report By Mile - Spring 2014

## **Sutter Maintenance Yard East Levee Sacramento River**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Sacramento River	Left	20.39	03/13/2014 03/13/2014	Bob Duffey

LM Start	15.53	Rating **	М	Issue No.	55			
LM End	15.53	Issue Type +	Ма	Location *	WS			
Catagony	Category				GPS Latitude/Longitude			
Calegory			Start		End			
Item	USACE E	rosion Survey	′	39.33144	۰ ۲	39.332716 °		
пеш				-122.029440 °		-122.029953 °		
DWR ID								
	Action/Comments							

Inspector Comments: 2004 - Slowly eroding but near vertical with no vegetation to hold it. 2005 - Erosion is close to levee toe but not into the levee section yet. 2010 - Some new toe scour. 2013: No observed changes. [2013 Site ID: SAC\_157-7\_R]



#### USACE 2013 Photo #1

LM Start	16.95	Rating **	М	Issue No.		36	
LM End	16.95	Issue Type +	En	Location *	LS		
Category Earthen Levee			GPS Latitude/Longitude				
Category				Start		End	
Item	Encroachments			39.347308 °		39.347308	
item			-122.015264 °		-122.015264		
DWR ID	DWR_ST0	003_01_f _ 2012	2_36				
Action/Comments							
Prunings							
1							



View of the brush pile along the landside toe.

Photo 1 of 1: rduffey\_s\_20140304\_664.jpg

LM Start	17.44	Rating **	М	Issue No.	30		
LM End	17.44	Issue Type +	En	Location *	LS		
Category Earthen Levee			GPS Latitude/Longitude				
			Start		End		
Item	Encroachments			39.351311 °		39.351311 °	
пеш			-122.00940	)9 °	-122.009409 °		
DWR ID	DWR_ST0	003_01_s _ 201	3_30				
Action/Comments							
Prunings							



View of the walnut orchard stumps along the landside toe.

Location LS : Land Side WS: Water Side CR : Crown

Monday, June 16, 2014 13:22

Rating

A : Acceptable
M : Minimally Acceptable U : Unacceptable

N: Not Inspected/Rated : Corrected A/W: Acceptable but Monitor & Maintain + Issue Type

Ma : Maintenance Deficiancy Ob: Design & System Obsolescence En : Enforcement

# Levee Inspection Report By Mile - Spring 2014

## **Sutter Maintenance Yard East Levee Sacramento River**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Sacramento River	Left	20.39	03/13/2014 03/13/2014	Bob Duffey

LM Start	17.45	Rating **	М	Issue No.	136			
LM End	17.45	Issue Type +	En	Location *	LS			
Category Earthen Levee				GPS Latitude/Longitude				
Calegory			Start		End			
Item	Encroachments			39.351447 °		39.351447	0	
пеш				-122.009385 °		5 ° -122.009385 °		
DWR ID	DWR_ST0	003_01_f _ 201	3_136					
Action/Comments								
Prunings								



View of the prunings at the toe of the levee.

LM Start	18.00	Rating **	М	Issue No.		10	
LM End	18.08	Issue Type +	Ma	Location *	LS		
Category Earthen Levee			GPS Latitude/Longitude				
Category				Start		End	
Item	Encroachments			39.358956°		39.359565 °	
item				-122.0074	92 °	-122.006219	0
DWR ID	DWR_ST0	003_01_s _ 201	2_10				
Action/Comments							
Firewood							

No Photos

LM Start	18.04	Rating **	М	Issue No.		16	
LM End	18.18	Issue Type +	Ма	Location *		LS	
Category Earthen Levee			GPS Latitude/Longitude				
Calegory			Start		End		
Item	Encroachments			39.359188 °		39.359980 °	
пеш				-122.006878 °		-122.004517 °	
DWR ID	DWR_ST0	003_01_s _ 201	2_16				
	Action/Comments						
Equipment							



View of the equipment and trees next to the landside toe of the levee.

\* Location LS : Land Side WS : Water Side CR : Crown \* Rating
A : Acceptab

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N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain + Issue Type

Ma : Maintenance Deficiancy
Ob : Design & System Obsolescence

### Levee Inspection Report By Mile - Spring 2014

### **Sutter Maintenance Yard East Levee Sacramento River**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Sacramento River	Left	20.39	03/13/2014 03/13/2014	Bob Duffey

LM Start	18.65	Rating **	М	Issue No.	50		_
LM End	18.65	Issue Type +	En	Location *	LS		
Cotogony	Suppleme	ental		GPS Lat	itud	le/Longitude	
Category		Start		End			
Item	DWR UCIP Field Study			39.36286	6 °	39.362866	0
пеш				-121.99799	3°	-121.997993	0
DWR ID	DWR_ST0	003_01_s _ 201	4_50				

Action/Comments
Inspector Comments: FS\_ID:26240

EP\_NO: N/A Repair Type:

Crossing Status:
UCIP Comments: It is not an abandoned crossing. Sloughing at outlet and levee slope is damaged due to sloughing/24/2013 Same as last inspection/2/19/2013 Same as last inspection.

FIELD\_STRUCT\_DESC: A 36- inch corrugated metal drainpipe through the levee, 20.0 feet below the crown. Slide gate at the waterward toe.

O&M manual 136, revision May 2011. FS Date: 1/2/2014 3:05:54 PM



Waterside view: overview of sliding gate structure

LM Start	18.74	Rating **	М	Issue No.	51		
LM End	18.74	Issue Type +	En	Location *	LS		
Catagony	Suppleme	ental		GPS La	atitud	e/Longitude	
Category				Start		End	
Item	DWR UC	IP Field Study	,	39.3640	67 °	39.364067	0
пеш				-121.9977	92 °	-121.997792	0
DWR ID	DWR_ST0	003_01_s _ 201	4_51				

#### Action/Comments

Inspector Comments: FS\_ID:26263

EP\_NO: N/A Repair Type: Crossing Status:

UCIP Comments: According to local people, the crossing is functional. The gap between 8-inch and 24-inch pipes is grouted with cement. Inlet structure is filled with sol 1/24/2013 Same as last

inspection12/19/2013 Same as last inspection.

FIELD\_STRUCT\_DESC: A 8-inch steel pipe sleeved into 24- inch corrugated metal drain pipe through the levee, 19.0 feet below the crown. Slide gate at waterward toe and concrete inlet box on landside of the levee. O&M manual 136, revision May 2011.

FS Date: 1/3/2014 6:54:53 AM



Landside view: overview of inlet structure

\* Location

LS: Land Side

WS: Water Side

CR: Crown

\* Rating

A : Acceptable
M : Minimally Acceptable
U : Unacceptable

N : Not Inspected/Rated C : Corrected /W : Acceptable but Monitor & Maintain + Issue Type

Ma : Maintenance Deficiancy
Ob : Design & System Obsolescence

### Levee Inspection Report By Mile - Spring 2014

### **Sutter Maintenance Yard East Levee Sacramento River**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Sacramento River	Left	20.39	03/13/2014 03/13/2014	Bob Duffey

LM Start	19.62	Rating **	М	Issue No.		52		
LM End	19.62	Issue Type +	En	Location *		LS		
Supplemental				GPS Latitude/Longitude				
Calegory	Category					End		
Item	DWR UCIP Field Study			39.37522	1°	39.375221		
пеш				-121.99587	°	-121.995878		
DWR ID DWR_ST0003_01_s _ 2014_52								

Action/Comments

Inspector Comments: FS\_ID:26268

EP\_NO: N/A Repair Type: Crossing Status:

UCIP Comments: Slide Gate WS not found. An abondoned pump and steel pipe found on WS. A 6 ft x 8 ft concrete distribution box with a

CMP found on LS. Box filled with soil. An abondoned

crossing/24/2013 Same as last inspection/12/19/2013 Same as last inspection.

FIELD\_STRUCT\_DESC: 36 inch pipe, 21.7 ft invert below crown. O&M

manual 136, revision May 2011. FS Date: 1/3/2014 7:12:00 AM



Landside view: concrete distrinution box and pipe

\* Location
LS: Land Side
WS: Water Side
CR: Crown

\*\* Rating

A : Acceptable
M : Minimally Acceptable
U : Unacceptable

N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain + Issue Type

Ma : Maintenance Deficiancy
Ob : Design & System Obsolescence

### **Unit Cover Sheet**

### **Spring 2014 Levee Inspection Results**

### **Sutter Maintenance Yard East Levee Sacramento River**

Waterway	Bank	Unit Miles
Unit No. 02 Colusa Bypass	Right	2.20

	Spring (March - May)	Summer (June - August)	(September - November) Fall	Winter (December - February)
Unit Maintenance Rating (Fall Only)				
Date of Inspection	03/12/2014 - 03/12/2014			
DWR Inspector	Bob Duffey			
Accompanied By	Bryan Reniff Sutter Maintenance Yard			

#### **Summer & Winter Inspections**

The Local Maintaining Agency (LMA) is responsible for summer and winter inspections. The LMA is required to submit a report regarding summer and winter inspections to the California Department of Water Resources (DWR).

DWR must be informed on the:

- a) completion of the inspection
- b) any changes other than the results of normal maintenance
- c) corrections to deficiencies noted in this report

If additional items are noted, further documentation of those items must also be submitted.

The LMA should submit this information to DWR using the LMA web application tool available at:

### http://cdec.water.ca.gov/lma.html

If the LMA is unable to submit information on this webpage, please contact DWR for assistance.

The LMA should submit the information and any associated documentation by September 30 for summer inspections and March 31 for winter inspections.

# Levee Inspection Report By Mile - Spring 2014

## **Sutter Maintenance Yard East Levee Sacramento River**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Colusa Bypass	Right	2.20	03/12/2014 03/12/2014	Bob Duffey

LM Start	0.01	Rating **	М	Issue No.		1	٦
LM End	0.01	Issue Type +	Ma	Location *	LS		+
	Earthen L	•••		GPS La	atitud	le/Longitude	
Category						End	
Item	Vegetatio	39.232058 °		39.232058	0		
item				-121.9955	14 °	-121.995514	0
DWR ID	DWR_ST0	003_02_s _ 201	2_1				
Action/Comments							
Elderberries are blocking visibility and flood fight capability.							



View of the elderberries along the landside toe of the levee.

LM Start	0.67	Rating **	Α	Issue No.		2	
LM End	0.67	Issue Type +	Ма	Location *		LS	
Category	Catagoria Earthen Levee			GPS Latitude/Longitude			
Calegory		Start			End		
Item	Vegetation			39.2314	05 °	39.231405 °	
item				-121.9835	42 °	-121.983542 °	
DWR ID	DWR_ST0	003_02_s _ 201	4_2				
Action/Comments							
Control annual grass and weeds on the levee slopes and easements.							



View of the native grasses on both slopes.

\*\* Rating

A : Acceptable
M : Minimally Acceptable
U : Unacceptable

N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain + Issue Type

Ma : Maintenance Deficiancy
Ob : Design & System Obsolescence

### **Unit Cover Sheet**

### **Spring 2014 Levee Inspection Results**

### **Sutter Maintenance Yard East Levee Sacramento River**

Waterway	Bank	Unit Miles
Unit No. 03 Colusa Bypass	Left	2.28

	Spring (March - May)	Summer (June - August)	(September - November) Fall	Winter (December - February)
Unit Maintenance Rating (Fall Only)				
Date of Inspection	03/12/2014 - 03/12/2014			
DWR Inspector	Bob Duffey			
Accompanied By	Bryan Reniff Sutter Maintenance Yard			

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# Levee Inspection Report By Mile - Spring 2014

### **Sutter Maintenance Yard East Levee Sacramento River**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 03 Colusa Bypass	Left	2.28	03/12/2014 03/12/2014	Bob Duffey

LM Start	0.56	Rating **	Α	Issue No.		1		
LM End	0.56	Issue Type +	Ma	Location *	LS			
Category Earthen Levee				GPS Lat	itud	e/Longitude		
Category			Start		End			
Item	Vegetatio	n	39.23723	4 °	39.237234 °			
пеш				-121.98397	9 °	-121.983979 °		
DWR ID	DWR_ST0	003_03_s _ 201	4_1					
Action/Comments								
Control an	Control annual grass and weeds on the levee slopes and easements.							



View of the native grasses on both slopes.

LM Start	1.98	Rating **	М	Issue No.		10	
LM End	1.98	Issue Type +	Ма	Location *		LS	
Category Earthen Levee			GPS La	atitud	le/Longitude		
Calegory			Start		End		
Item	Vegetatio	Vegetation			88 °	39.244888 °	
item				-121.9655	95 °	-121.965595 °	
DWR ID	DWR_ST0	003_03_s _ 201	2_10				
Action/Comments							
Elderberries are blocking visibility and flood fight capability.							



View of the elderberries along the landside toe of the levee.

Rating

A : Acceptable M : Minimally Acceptable U : Unacceptable

N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain + Issue Type

Ma : Maintenance Deficiancy
Ob : Design & System Obsolescence En : Enforcement

### **Unit Cover Sheet**

### **Spring 2014 Levee Inspection Results**

### **Sutter Maintenance Yard East Levee Sacramento River**

Waterway	Bank	Unit Miles
Unit No. 04 Moulton Bypa	ss Right	0.30

	Spring (March - May)	Summer (June - August)	(September - November) Fall	Winter (December - February)
Unit Maintenance Rating (Fall Only)				
Date of Inspection	03/13/2014 - 03/13/2014			
DWR Inspector	Bob Duffey			
Accompanied By	Bryan Reniff Sutter Maintenance Yard			

#### **Summer & Winter Inspections**

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# Levee Inspection Report By Mile - Spring 2014

## **Sutter Maintenance Yard East Levee Sacramento River**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 04 Moulton Bypass	Right	0.30	03/13/2014 03/13/2014	Bob Duffey

LM Start	0.02	Rating **	М	Issue No.		2		
LM End	0.02	Issue Type +	Ma	Location *	WS			
Catagony	Earthen Levee				GPS Latitude/Longitude			
Category			Start		End			
Item	Vegetation			39.338141 °		39.338141 °		
пеш				-122.021852 °		-122.021852 °		
DWR ID	DWR_ST0	003_04_s _ 201	2_2					
Action/Comments								
Elderberries are blocking visibility and flood fight capability.								



View of an elderberry bush by the waterside toe.

LM Start	0.09	Rating **	Α	Issue No.		1	
LM End	0.09	Issue Type +	Ма	Location *		LS	
Catagony	Cotogon/ Earthen Levee			GPS Latitude/Longitude			
Calegory	Category			Start		End	
Item	Vegetation			39.337842 °		39.337842 °	
item				-122.020587 °		-122.020587 °	
DWR ID	DWR_ST0	003_04_s _ 201	4_1				
Action/Comments							
Control annual grass and weeds on the levee slopes and easements.							



View of the native grasses on both slopes.

A : Acceptable
M : Minimally Acceptable
U : Unacceptable

N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain + Issue Type

Ma : Maintenance Deficiancy
Ob : Design & System Obsolescence
En : Enforcement

### **Unit Cover Sheet**

### **Spring 2014 Levee Inspection Results**

### **Sutter Maintenance Yard East Levee Sacramento River**

Waterway	Bank	Unit Miles
Unit No. 05 Moulton Bypass	Left	2.00

	Spring (March - May)	Summer (June - August)	(September - November) Fall	Winter (December - February)
Unit Maintenance Rating (Fall Only)				
Date of Inspection	03/13/2014 - 03/13/2014			
DWR Inspector	Bob Duffey			
Accompanied By	Bryan Reniff Sutter Maintenance Yard			

#### **Summer & Winter Inspections**

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- b) any changes other than the results of normal maintenance
- c) corrections to deficiencies noted in this report

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# Levee Inspection Report By Mile - Spring 2014

### **Sutter Maintenance Yard East Levee Sacramento River**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 05 Moulton Bypass	Left	2.00	03/13/2014 03/13/2014	Bob Duffey

		D (' ++					
LM Start	0.77	Rating **	A/W	Issue No.		1	
LM End	0.77	Issue Type +	Ma	Location *		LS	
Category Earthen Levee			GPS Latitude/Longitude				
Calegory			Start		End		
Item	Animal Control			39.340822 °		39.340822 °	
пеш				-122.009453 °		-122.009453 °	
DWR ID	DWR_ST0	003_05_s _ 201	3_1				
Action/Comments							
Renair the levee slone damaged by livestock and prevent large animal							

Repair the levee slope damaged by livestock and prevent large animal access.



View of the damage to the levee caused by the landowners livestock on both slopes.

LM Start	0.77	Rating **	М	Issue No.		2	
LM End	0.77	Issue Type +	Ма	Location *		LS	
Category Earthen Levee				GPS Latitude/Longitude			
Category				Start		End	
Item	Slope Sta	bility		39.3408	22 °	39.340822	0
пеш		-122.009452 °		-122.009452	0		
DWR ID DWR_ST0003_05_s _ 2013_2							
Action/Comments							

Action/Comments

Repair the levee slope damaged by vehicle traffic and prevent access where possible.



View of the repaired rodent holes and bait station along the landside slope.

LM Start	0.85	Rating **	С	Issue No.		5		
LM End	0.85	Issue Type +	Ma	Location *		WS		
Category Earthen Levee				GPS Latitude/Longitude				
Calegory		Start		End				
Item	Animal Co	imal Control		39.3402	13 °	39.340213 °		
пеш				-122.008113 °		-122.008113 °		
DWR ID	DWR_ST0	003_05_s _ 201	2_5					
Action/Comments								
Exterminat	te rodents	and backfill a	nd comp	act or grou	t bur	rows.		

No Photos

\* Location

LS: Land Side

WS: Water Side

CR: Crown

\*\* Rating

A : Acceptable
M : Minimally Acceptable
U : Unacceptable

N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain + Issue Type

Ma : Maintenance Deficiancy
Ob : Design & System Obsolescence

# Levee Inspection Report By Mile - Spring 2014

# **Sutter Maintenance Yard East Levee Sacramento River**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 05 Moulton Bypass	Left	2.00	03/13/2014 03/13/2014	Bob Duffey

LM Start	0.94	Rating **	Α	Issue No.		3	
LM End	0.94	Issue Type +	Ма	Location *		LS	
Category	Earthen Levee			GPS Latitude/Longitude			
				Start		End	
Item	Vegetation			39.3395	94 °	39.339594°	
				-122.0066	05 °	-122.006605 °	
DWR ID	DWR_ST0003_05_s _ 2014_3						
Action/Comments							
Control annual grass and weeds on the levee slopes and easements.							



View of the native grasses on both slopes.

\*\* Rating

A : Acceptable
M : Minimally Acceptable
U : Unacceptable

N : Not Inspected/Rated
C : Corrected
A/W : Acceptable but Monitor & Maintain

+ Issue Type

Ma : Maintenance Deficiancy
Ob : Design & System Obsolescence